

In the Specification:

Please amend the specification as indicated in the separate sheets attached below and entitled "Specification Amendments Filed 03/08/05 with Response to Office Action mailed by Examiner on 09/08/2004 in Patent Application No. 10/068,433".

In the Claims:

Please amend the claims as indicated in the separate sheets attached below and entitled "Claim Amendments Filed 03/08/05 with Response to Office Action mailed by Examiner on 09/08/2004 in Patent Application No. 10/068,433".

REMARKS

It is noted with appreciation that claims 1, 3-20, 22-23, and 29-32 are deemed to recite allowable subject matter. Claims 21, 23, 26 and 31 are amended, claims 27 and 28 are canceled, and new claims 33 and 34 are added. Now in the case are claims 1, 3-26, and 29-34, of which claims 1, 21, 29, and 33 are independent.

Amendments to the Specification

Amendments to the paragraph on Page 4 beginning with Line 5 are respectfully requested to correct minor typographical errors. The paragraph on Page 4 beginning with Line 5 is amended to delete " λ_{s2} " and insert -- λ_{s2} --. These corrections make the subscripting consistent with the rest of the specification. No new matter is added.

The paragraph on Page 4 beginning with Line 29 is amended to delete "120" and insert --140--. These corrections make the numbering of the fiber 140 consistent within this paragraph and other paragraphs of the specification. No new matter is added.

The paragraph on Page 6 beginning with Line 1 is amended to delete “to”, as it was redundant with “toward” which follows it. This same paragraph is further amended to delete “135” and insert --140--. This change makes the numbering of fiber 140 and WDM 135 conform to the rest of this paragraph, as well as the rest of the specification. No new matter is added with these amendments.

The paragraph on Page 8 beginning with Line 12 is amended to delete “bass” and insert --bath--. This amendment conforms the designation of the optical bath with Fig. 4. No new matter is added.

The paragraph on Page 8 beginning with Line 27 is amended to delete “Fiber” and insert --System--. This change makes the reference to system 400 and fiber 120 consistent within this paragraph and the four paragraphs that follow it. No new matter is added.

The paragraph on Page 10 beginning with Line 10 is amended to delete “Fig” and insert --Fig.--. This change corrects a minor typographical error of punctuation. Further, this same paragraph is amended to delete “ λ_{s2} ”, λ_{s2} ,” and insert -- λ_{s2} ”, λ_{s2} ”--. This change corrects typographical errors in the subscripts, eliminating redundancies, and bringing the subscripts in conformance to the other such references within this same paragraph, as well as other paragraphs throughout the specification. No new matter is added with any of these amendments.

Claim rejections – 35 USC §112

Claims 26-28 are rejected under 35 USC § 112 for lack of antecedent basis for the limitation “the predetermined energy”. Claims 27 and 28 are canceled, and claim 26 is amended in a manner that obviates this rejection. Accordingly, reconsideration and withdrawal of the objection to claims 26-28 is respectfully requested.

Claim Rejections – 35 USC § 103

Claims 21, 24, 25 and 28 are rejected under 35 USC § 103(a) as unpatentable over Chang et al. '965 in view of non-patent literature to Chang et al. entitled "A novel intracavity for efficient cascaded Raman generation using WDM couplers". The Examiner in particular notes Figure 3 of Chang et al. '965.

As amended claim 21 recites "a first fiber Bragg grating in the first non loop-shaped portion of the fiber, the first fiber Bragg grating being capable of substantially reflecting ~~the pump~~ energy comprising a Stoke shifted wavelength" and "a second fiber Bragg grating in the second non loop-shaped portion of the fiber, the second fiber Bragg grating being capable of substantially reflecting energy having a wavelength comprising ~~a~~ the Stoke shifted wavelength." No new matter is added: see FIGURE 3 and the description on page 7 of the application as filed regarding FIGURE 3, and in particular the description relating to the reflector 150 shown in FIGURE 3.

Chang et al. '965 fails to teach or suggest the invention as recited in amended claim 21. See in particular Figure 3 of Chang et al. '965 and the description of Figure 3 at column 7, lines 20-55. The non-patent Chang literature fails to remedy the above noted defect of 'Change '965.

Claims 24-25 and 28 depend from claim 21 and, at least for the reasons noted above, Chang et al. '965, alone or in combination with the non-patent Chang literature, fails to teach or suggest the invention as recited in claims 24-25 and 28.

Reconsideration and withdrawal of the rejection of claims 21, 24-25 and 28 is respectfully requested.

Amendments to claims 23, 26 and 31

Claim 23 is amended so as to further define the fourth fiber Bragg grating, rather than the third fiber Bragg grating. No new matter is added: see FIGURE 3 and the description on pages 7-8 of the application as filed regarding FIGURE 3. Claim 26 is amended to recite that “the first Bragg grating is capable of substantially reflecting the pump energy.” No new matter is added. Again, reference is made to FIGURE 3 and the description on page 7 of the application as filed regarding FIGURE 3, and in particular the description relating to the reflector 150 shown in FIGURE 3. Claim 31 is amended so as to improve the form thereof via the use of consistent terminology.

New Claims 33 and 34

New claim 33 recites in independent form the subject matter of original claim 22, which depended from, and hence incorporated by reference, the subject matter of claim 21, and which was deemed allowable in the outstanding Office Action. New claim 34 depends from claim 33 and corresponds in part to original claim 23.

Comments on Statement of Reasons for Allowance

Claims 1 and 29 are understood to be allowable based on the language recited in claims 1 and 29. Minor discrepancies between the Examiner’s summary of claims 1 and 29 in the stated Reasons for Allowance are understood to be inadvertent and not to in any way limit claims 1 and 29 beyond the express language of claims 1 and 29. For example, claim 1 recites “the first fiber is devoid of a reflector substantially reflecting energy at the wavelength”, whereas the Reasons for Allowance state “the first fiber portion being devoid of a reflector substantially reflecting energy at a wavelength”. Claim 1 recites “the wavelength”, not “a wavelength”, and the term “the wavelength” finds antecedent basis in claim 1. Furthermore, claim 29 recites “no grating of the third pair is located between the gratings of the second pair”, whereas the Reasons for Allowance state “no

grating of a third grating pair being located between the gratings of the second grating pair”.

Request for Three Month Extension of Time

Applicants hereby request a three month extension of time for response to the outstanding Office Action mailed September 8, 2004, thereby extending the time for response to March 8, 2005. Authorization is hereby granted to charge the Small Entity fee of \$510.00 for the requested three month extension of time to Nufern Deposit Order Account Number 50-2343.

Authorization to Charge Fees for New Claims 33 and 34

Authorization is hereby granted to charge Nufern Deposit Order Account No. 50-2343 the Small Entity fee of \$100 for the addition of new independent claim 33 to the present application and the Small Entity fee of \$25 for the addition of new dependent claim 34 to the present application.

CONCLUSION

This Response and Amendment attends to all issues raised in the outstanding Office Action. Early allowance and passage to issue is respectfully requested. No fees other than the fees associated with the Request for a Three Month Extension of Time and the addition of new claims 33 and 34 are considered to be due in conjunction with the submission of this Response and Amendment. However, if it is determined that an additional fee is due or that Applicants are underpaying or overpaying a fee, authorization is hereby granted to debit or credit, as appropriate, Nufern Deposit Order Account 50-2343.

Please do not hesitate to contact the undersigned if any issues are deemed to remain unresolved.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "P.J. Rainville", with a stylized flourish at the end.

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